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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,532	01/22/2002	Geun Su Lee	30205/38083	5968

4743 7590 08/23/2004

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EXAMINER

THORNTON, YVETTE C

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/054,532

Applicant(s)

LEE ET AL.

Examiner

Yvette C. Thornton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-21 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-21 and 30-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is written in reference to application number 10/054532 filed on January 22, 2002 and published as US 2003/0022100 A1 on January 30, 2003.

Response to Amendment

1. Claims 1-15 and 22-29 have been cancelled. Claims 16-21 and 30-35 are currently pending. Claims 30-35 are newly added.
2. Support for the new claims 30-35 is found in cancelled claims 3-7 and 29.
3. Prosecution on the merits of this application is reopened on claims 16-21 considered unpatentable for the reasons indicated below: See paragraphs 5-8 below.

Request for Continued Examination (RCE)

4. The request filed on April 26, 2004 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 10/054532 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
6. Claims 16-21 and 30-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and

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Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, the claims 16, 30 and 35 recite the broad recitation "wherein R1 is selected from the group consisting of H, halogen, (C₁-C₂₀) alkyl, (C₁-C₂₀) alkyl with halogen substituents, (C₁-C₂₀) alkyl containing an ether group (-O-), (C₁-C₂₀) alkyl with halogen substituents and containing an ether group and -COOR';", and the claims also recite "R1, R4 and R7 are individually acid labile protecting groups;" which is the narrower statement of the range/limitation.

7. Further, all the groups presented for R1 are not inherently acid labile (i.e., H), therefore the examiner is unclear as to what the applicant is claiming as his invention.

8. Applicants have also fail to provide a definition for claimed substituent R'

Clarification is requested.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

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matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 30-32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nachbur et al. (US 3449302 A) in view of Aoai (US 2002/0061464 A1). Nachbur teaches copolymers comprising vinylidenechloride, butadienesulphone, an ethylenically unsaturated film forming monomer and an ethylenically unsaturated hydrophilic monomer. The said ethylenically unsaturated film forming monomer is an alkyl ester of acrylic, methacrylic or itaconic acid whose alkyl residue contains 1-8 carbon atoms or acrylonitrile (c. 1, l. 56-67). It would have been obvious to one of ordinary skill in the art to use any C1-8 alkyl group, which is well known and conventional in the art. It is the examiner's position that a C1-8 alkyl clearly encompasses the claimed t-butyl group of instant claim 32. Furthermore, Aoai teaches that specific examples of (meth)acrylic acid esters include tert-butyl (meth)acrylate, cyclohexyl (meth)acrylate and ethylhexyl (meth)acrylate (p. 0209-0210, all which are readily acid labile. One of ordinary skill would have been motivated by the teachings of Nachbur to use any alkyl ester group of acrylic or methacrylic acid having a C1-8 alkyl group, such as those disclosed by Aoai as conventional, as the three monomer of the taught polymer of Nachbur.

Allowable Subject Matter

11. Claims 33 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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12. Claims 33 and 34 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. Claims 16-21 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: the prior art reference of Nachbur et al. (US 3449302 A) teaches copolymers comprising vinylidenechloride, butadienesulphone, an ethylenically unsaturated film forming monomer and an ethylenically unsaturated hydrophilic monomer. Nachbur however failed to teach and/or suggest the said polymer being admixed with a photoacid generator and an organic solvent to form a photoresist composition. One of ordinary skill in the art would not have been motivated nor would it have been obvious to incorporate a photoacid generator into the teachings of Nachbur. Furthermore, the examiner has found no motivation to fluorinate the taught alkyl ester groups in the ethylenically unsaturated film forming monomer.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday 8-6:30.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Yvette C. Thornton", with a stylized flourish at the end.

Yvette Clarke Thornton
Primary Examiner
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yct
August 19, 2004